

CLAIMS

1. A method for storing network traffic data, the method comprising:
retrieving a hit record of network traffic data;
assigning the hit record to a visitor;
5 recognizing visit information for the visitor based on the hit record; and
storing the visit information for the visitor in a database.

10 2. A method according to claim 1, wherein retrieving a hit record includes
retrieving the hit record from a log file.

15 3. A method according to claim 1, wherein retrieving a hit record includes
retrieving the hit record from the database.

20 4. A method according to claim 1, wherein recognizing visit information
includes assigning the hit record to a visit.

25 5. A method according to claim 4, wherein assigning the hit record includes
selecting the visit based on an Internet Protocol (IP) address within the hit record and a time
delta since a previous hit record with the IP address.

30 6. A method according to claim 4, wherein assigning the hit record includes
selecting the visit based on a cookie within the hit record and a time delta since a previous hit
record with the cookie.

25 7. A method according to claim 1, wherein recognizing visit information
includes identifying a content group viewed by the visitor.

30 8. A method according to claim 1, wherein recognizing visit information
includes identifying an advertising campaign that brought the visitor to a business.

9. A method according to claim 1, the method further comprising extracting the
visit information from a web-based form.

10. A method according to claim 9, wherein extracting the visit information includes identifying an amount of money spent during a visit.

11. A method according to claim 1, the method further comprising eliminating
5 inaccurate counting of visit information from the database.

12. A method according to claim 11, wherein eliminating inaccurate counting includes:

10 identifying an open visit; and
deleting visit information derived from the open visit.

13. A method according to claim 12, wherein:
the method further comprises storing the hit record in a database; and
eliminating inaccurate counting further includes regenerating visit information from
15 the hit record in the database for the open visit.

14. A method according to claim 12, wherein eliminating inaccurate counting further includes:

20 detecting an open visit in a current time slice;
determining a corresponding visit in an adjacent time slice; and
adding visit information from the open visit to the corresponding visit.

15. A method according to claim 1, wherein storing the visit information includes:
using a semaphore on the database for a time range; and
releasing the semaphore after the visit information is stored.
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16. A method according to claim 15, wherein storing the visit information further includes blocking an operation on the time range until the semaphore is released.

30 17. A method according to claim 1, further comprising:
using a semaphore on the database;
retrieving the visit information from the database; and
releasing the semaphore after the visit information is retrieved.

18. A method according to claim 1, wherein storing the visit information further includes taking a snapshot of a setting for the database.

5 19. A method according to claim 1, wherein retrieving a hit record includes filtering the hit record.

20. A method according to claim 1, the method further comprising purging the visit information from the database.

10 21. A method according to claim 1, further comprising storing the hit record in the database.

22. A method according to claim 21, further comprising purging the hit record from the database.

23. A computer-readable medium containing a program to store network traffic data, the program comprising:

retrieval software to retrieve a hit record of network traffic data;

assignment software to assign the hit record to a visitor;

recognition software to recognize visit information for the visitor based on the hit record; and

storing software to store the visit information for the visitor in a database.

25 24. A computer-readable medium containing a program according to claim 23, wherein the retrieval software includes retrieval software to retrieve the hit record from a log file.

30 25. A computer-readable medium containing a program according to claim 23, wherein the retrieval software includes retrieval software to retrieve the hit record from the database.

26. A computer-readable medium containing a program according to claim 23, wherein the recognition software includes assignment software to assign the hit record to a visit.

5 27. A computer-readable medium containing a program according to claim 26, wherein the assignment software includes selection software to select the visit based on an Internet Protocol (IP) address within the hit record and a time delta since a previous hit record with the IP address.

10 28. A computer-readable medium containing a program according to claim 26, wherein the assignment software includes selection software to select the visit based on a cookie within the hit record and a time delta since a previous hit record with the cookie.

20 29. A computer-readable medium containing a program according to claim 23, wherein the recognition software includes identification software to identify a content group viewed by the visitor.

30. A computer-readable medium containing a program according to claim 23, wherein the recognition software includes identification software to identify an advertising campaign that brought the visitor to a business.

25 31. A computer-readable medium containing a program according to claim 23, the program further comprising extraction software to extract the visit information from a web-based form.

32. A computer-readable medium containing a program according to claim 31, wherein the extraction software includes identification software to identify an amount of money spent during a visit.

30 33. A computer-readable medium containing a program according to claim 23, the program further comprising elimination software to eliminate inaccurate counting of visit information from the database.

34. A computer-readable medium containing a program according to claim 31, wherein the elimination software includes:

- identification software to identify an open visit; and
- deletion software to delete visit information derived from the open visit.

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35. A computer-readable medium containing a program according to claim 34, wherein:

- the program further comprises storing software to store the hit record in a database;
- and
- the elimination software further includes regenerating software to regenerate visit information from the hit record in the database for the open visit.

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36. A computer-readable medium containing a program according to claim 34, wherein the elimination software further includes:

- detection software to detect an open visit in a current time slice;
- determination software to determine a corresponding visit in an adjacent time slice;
- and
- addition software to add visit information from the open visit to the corresponding visit.

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37. A computer-readable medium containing a program according to claim 23, wherein the storing software includes:

- using software to use a semaphore on the database for a time range; and
- releasing software to release the semaphore after the visit information is stored.

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38. A computer-readable medium containing a program according to claim 37, wherein the storing software further includes blocking software to block an operation on the time range until the semaphore is released.

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39. A computer-readable medium containing a program according to claim 23, the program further comprising:

- using software to use a semaphore on the database;
- retrieval software to retrieve the visit information from the database; and

releasing software to release the semaphore after the visit information is retrieved.

40. A computer-readable medium containing a program according to claim 23,
wherein the storing software further includes snapshot software to take a snapshot of a setting
5 for the database.

41. A computer-readable medium containing a program according to claim 23,
wherein the retrieval software includes filtering software to filter the hit record.

10 42. A computer-readable medium containing a program according to claim 23, the
program further comprising purging software to purge the visit information from the
database.

43. A computer-readable medium containing a program according to claim 23, the
program further comprising storing software to store the hit record in the database.

44. A computer-readable medium containing a program according to claim 43, the
program further comprising purging software to purge the hit record from the database.

20 45. An apparatus designed to store network traffic data, the apparatus comprising:
a computer system;
at least one hit record on the computer system;
a database on the computer system, the database designed to store visit information
derived from the hit record; and
means for deriving visit information from the hit record on the computer system.
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46. An apparatus according to claim 45, wherein the hit record is stored in a log
file on the computer system.

30 47. An apparatus according to claim 45, wherein the hit record is stored in the
database on the computer system.

48. An apparatus according to claim 45, wherein the means for deriving includes a data extractor designed to extract the visit information from the hit record.

49. An apparatus according to claim 45, the apparatus further comprising means
5 for eliminating inaccurately counted the visit information.

50. An apparatus according to claim 49, wherein the means for eliminating includes means for purging the inaccurately counted visit information from the database.

10 51. An apparatus according to claim 45, the apparatus further comprising a snapshot of a setting for the database.

15 52. An apparatus according to claim 45, the apparatus further comprising a semaphore for blocking an operation on a time range in the database.

20 53. A method for tracking a visit information, the method comprising:
information in a database.
assigning a name to the visit information;
specifying a source of a value for the visit information; and
storing the name of the visit information and the source of a value for the visit

25 54. A method according to claim 53, wherein specifying a source includes identifying a uniform resource locator (URL) and a parameter name for the value for the visit information.

30 55. A method according to claim 53, the method further comprising:
accessing the value for the visit information for a visitor; and
linking the visit information, the visitor, and the value for the visit information in the database.

56. A computer-readable medium containing a program to track a visitor characteristic, the program comprising:
assignment software to assign a name to the visit information;

specification software to specify a source of a value for the visit information; and storage software to store the name of the visit information and the source of a value for the visit information in a database.

5 57. A computer-readable medium containing a program according to claim 56,
wherein the specification software includes identification software to identify a uniform
resource locator (URL) and a parameter name for the value for the visit information.

58. A computer-readable medium containing a program according to claim 56, the
10 program further comprising:
accessing software to access the value for the visit information for a visitor; and
linking software to link the visit information, the visitor, and the value for the visit
information in the database.